CHARDON GROUP

35-LFE200

35 kV Class Fused Loadbreak Elbow



www.chardongroup.com

APPLICATION

The Chardon 35 kV Class Fused Loadbreak Elbow Connector combines a fully-shielded and insulated loadbreak elbow with full range current-limiting fuse protection. The Chardon Fused Loadbreak Elbow Connector provides a convenient and cost-effective method to add fusing protection to underground distribution systems utilizing 200 A, 35 kV Class loadbreak bushings. Designed as a hot stick operable switching device, it is tested at the maximum fuse rating in accordance with the IEEE 386-2006 standard. The product is fully sealed and submersible.

The fuse elbows use high-quality peroxide-cured EPDM rubber, manufactured in Chardon's facilities, under strict quality controls. Standard features include a copper probe adapter, bi-metal connector, plated copper loadbreak probe , and a stainless steel reinforced pulling eye. The product is designed to accept a wide range of cable conductor and insulation sizes.

Chardon is currently the only manufacturer offering fused elbows at the 35 kV level, ensuring protection and reliability in critical applications.

PRODUCT TESTS

Tests conducted in accordance with IEEE/ANSI Standard 386.

- Partial Discharge – 26 kV≤5pC
- AC 1 Minute Withstand – 50 kV
- Test Point Voltage Test

Tests conducted in accordance with Chardon manufacturing process requirements:

- Physical Inspection
- Periodic Dissection
- Periodic X-ray Analysis

VOLTAGE RATINGS

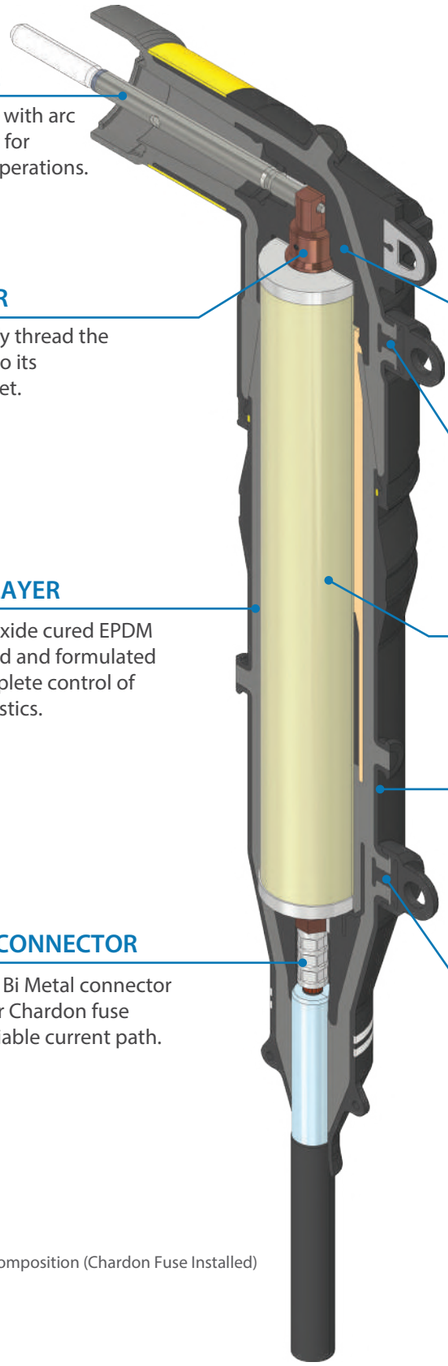
Voltage Class	35 kV
Max. Rating Phase to Phase	21.1 kV
Max. Rating Phase to Ground	21.1 kV
AC 1 Minute Withstand	50 kV
DC 15 Minute Withstand	103 kV
BIL and Full Wave Crest	150 kV
Partial Discharge	26 kV≤5pC

• Revision Date: 9.18.2026

CURRENT RATINGS

Description	Test Parameters
Continuous	Fuse rating
Switching	10 operations at 200 amps rms at 36.3 kV
Fault Close	10,000 amps rms symmetrical at 36.6 kV for 0.17 s after 10 consecutive successful switching operations

DETAILED COMPOSITION OF THE CHARDON 35 kV LOADBREAK FUSE ELBOW



LOADBREAK PROBE
Tin plated copper probe with arc extinguishing tip, allows for dependable switching operations.

PROBE ADAPTER
Designed to securely thread the loadbreak probe into its corresponding socket.

SEMICONDUCTING INSERT
Precision molded peroxide cured semiconducting insert provides corona-free electrostatic shielding of the compression connector.

TEST POINT

INSULATION LAYER
High quality peroxide cured EPDM insulation is mixed and formulated in-house for complete control of rubber characteristics.

CHARDON FUSE

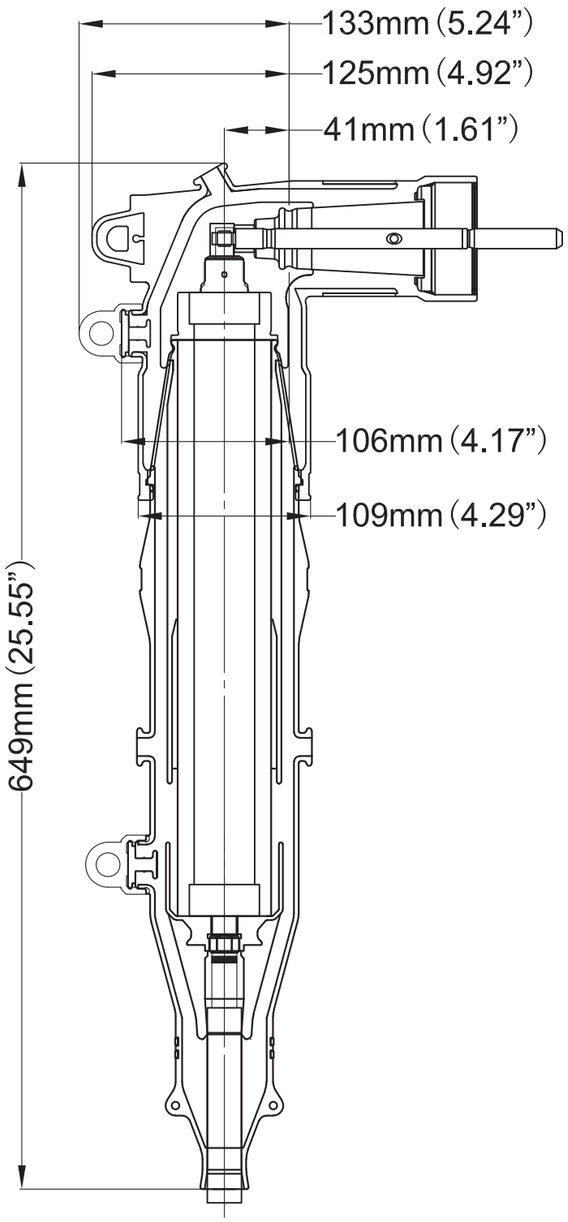
SEMICONDUCING SHIELD
Precision molded peroxide cured semiconducting shield provides ground shield continuity and meets IEEE standard 592.

BIMETAL CONNECTOR
Customized Bi Metal connector designed for Chardon fuse provides reliable current path.

TEST POINT

Fig 1: Detail Chardon Fuse Elbow Composition (Chardon Fuse Installed)

CHARDON 35 kV LOADBREAK FUSE ELBOW DRAWING



ORDERING INFORMATION

Chardon Loadbreak Fuse Elbow kits are packaged in a heavy duty plastic bag.

Each elbow kit includes the following:

- Fused Elbow, Cable Housing
- Fused Elbow, Elbow Housing
- Compression Lug Kit
- Probe
- Hex Wrench
- Silicone Grease
- Towel
- Installation Instruction Sheet

Note:
Current-limiting fuses sold separately. See "Electrical Characteristics of the Elbow Fuses" for electrical ratings and catalog numbers.

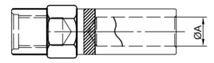
To order a Chardon 35 kV Fuse Elbow Kit, follow the steps below:

35-LFE200T	"X"	"Y"	"Z"

"X" = Enter Cable Range Code (C, D, E or F)
"Y" = If a Chardon Fuse will be used, Enter "CH"
"Z" = Enter Conductor Code (See Conductor Code Table Below)

Range Code	Inches	Millimeters
C	0.846 - 1.051	21.50 - 26.70
D	0.976 - 1.181	24.80 - 30.00
E	1.087 - 1.311	27.60 - 33.30
F	1.232 - 1.469	31.30 - 37.30

Conductor Code Table



CONDUCTOR CODE	Concentric or Compressed		Compact or Solid		Inner Diameter ØA (mm)
	AWG or kcmil	mm²	AWG or kcmil	mm²	Bi-metal Lug
01	#6	-	#4	-	5.13
02	#4	-	#3	25	6.55
03	#3	25	#2	35	7.32
04	#2	35	#1	-	8.13
05	#1	-	1/0	50	9.09
06	1/0	50	2/0	70	10.20
07	2/0	70	3/0	-	11.35
08	3/0	-	4/0	95	13.33
09	4/0	95	250	120	14.00
10	250	120	300	-	15.21

Example :
To order a Chardon 35 kv Loadbreak Fused Elbow with a cable insulation diameter of 0.850", using a Chardon fuse, and 3/0 compresion connector, the part number would be: 35-LFE200TCCH08

Replacement Parts

Compression Lug Kit	Part Number
Chardon Fuse Compression Lug	LFEK-CH + Conductor Code

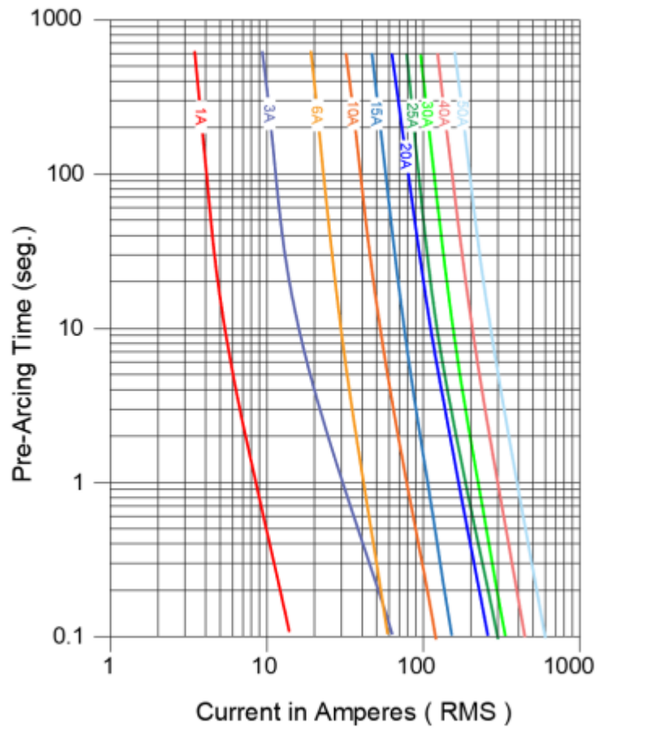
CHARDON FUSES





Electrical Characteristics of the Elbow Fuses

Voltage Class System (kV)	Fuse Voltage Rating (kV)	Fuse Catalog Number	Fuse Current Rating (A)	Pre-arc I^2t	Clearing I^2t	Peaking Capacity (kA)	voltage (kV)
35	21	CHFEF230001	1	18	150	50	64
		CHFEF230003	3	160	787	50	64
		CHFEF230006	6	600	3150	50	64
		CHFEF230010	10	900	4650	50	64
		CHFEF230015	15	1380	11000	50	64
		CHFEF230020	20	1680	13000	50	64
		CHFEF230025	25	3660	23800	50	64
		CHFEF230030	30	5390	13800	50	60
		CHFEF230040	40	6240	16856	50	60
		CHFEF230050	50	10000	24900	50	60





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